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ABSTRACT

Observation of machine or production operators in a Singapore factory for insight into their need for English language skills, existing skills, and the results of a basic English language program in which many were enrolled revealed that, although the workers were generally poorly educated and had minimal English skills, they were able to decode the relatively difficult texts required to do their jobs. It is possible that this type of reading is accomplished by rote-learning rather than creative construction or the ability to use language generatively in a variety of contexts. However, within the very restricted realm of the texts in question, the language behavior is generative. This finding suggests that people can learn enough language to do tasks simply by doing the tasks repeatedly; in turn doing things that involve the use of language may be the most economical way of learning language, if not the most efficient. The appendices include a job instruction sheet and checklist of safety regulations. (MSE)

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Learning Language on the Worksite : some Implications for Pedagogy

BIKRAM K. DAS

An international seminar on language teaching can be expected to concern itself primarily with mainstream learners. This paper, however, is about a different kind of learner, who is located outside the educational system, and is yet expected to perform quite remarkable feats of language learning, almost entirely on his own. It is true that in recent years some concern has been shown for what is euphemistically called "the non-formal sector", and that attempts are being made to help the out-of-school learner. But the reforms or innovations attempted are usually borrowed from the school system; it is assumed that what works in the 'ordinary' classroom will also succeed outside it. While some effort is made to adapt teaching strategies to suit the out-of-school learner, the basic assumptions about what constitutes language learning and how it takes place remain unaltered. In this paper an attempt will be made to reconsider some of these assumptions. I wish to stress that I am not concerned with non-formal education in general, but only with a particular subtype of it, which seems to involve a rather different kind of language learning process from the one we associate with classroom teaching. The title of the paper may suggest that I would like to apply some of the insights gathered from the learning of language in non-formal contexts to 'normal' language teaching. This would probably be a useful reversal of the trend I have described above, but beyond a few tentative remarks I shall not attempt to discuss any possible applications. As I hope to bring out, the conditions under which language is often learnt outside the classroom are so different from those inside it that no transfer may be possible. In any case, I would prefer to stimulate discussion than to pre-empt it.

The remarks I have to offer are based on cursory and probably inadequate observations made during a recent survey of the English

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language needs of industrial workers in Singapore. A part of the survey required on-the-job observation of certain categories of workers, to assess what specific uses of English were essential or important for them. The scale of observation was limited, mainly due to time constraints. It was difficult to arrange visits to factories : industrial houses in Singapore are very security-conscious and do not relish strangers with note-pads prowling around shopfloors. Eventually, we were able to visit five factories, representing different kinds of industry. Each visit lasted, on average, about three hours. A part of this time was spent in talking to management and supervisory staff in boardrooms, to obtain their views on the needs of workers for on-the-job communication in English. These meetings were followed by hurried conducted tours round the shopfloors, during which we recorded our observations. In a few cases we were able to observe sessions of on-the-job training or briefing, and had access to printed materials in English used by workers on the job.

While I hesitate to make any bold assertions on the basis of a few brief visits to a handful of factories, it may still be possible to offer a few exploratory remarks here. I sincerely hope it will be feasible to pursue the line of investigation that was attempted. The workers observed by us were either machine operators or production operators, on the lowest rung of the organisational ladder. Our reason for selecting them for observation was that many of them were being taught English under a scheme known as the Basic Education for Skills Training (BEST) programme.

More than half the workers observed were women. The largest group among them was in the age range 20–25. The majority were single, spoke one or other dialect of Chinese at home, and had been educated up to Primary Four level. (These data, incidentally, were obtained from a questionnaire filled out by similar groups of workers, not necessarily the ones we observed.)

A number of quick generalisations at this point may be helpful. First, there was little oral communication or interaction of any kind that these workers entered into while on the job. Each had limited, routine operations to perform, which required little interaction. Only some categories of workers, e.g., those concerned with maintaining inventories of stores, were required to interact frequently either with their co-workers or with outsiders.

In principle, workers at this level are expected to be able to

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interact on the job with their supervisors, e.g., foremen, team-leaders, etc. The purpose of such communications, normally is either to receive instructions given by a supervisor or to ask for assistance when faced with a problem such as a malfunction in a machine. Sometimes assistance is sought not from a supervisor but from another worker, perhaps at a slightly higher level (e.g., a technician.) However, workers are expected to solve most of their own problems, especially those of a very routine nature, and trained to do so. For example, machine operators are required to consult printed instructions (in English), displayed prominently at their work-stations, when a routine fault develops in a machine. The instructions list (and describe) the more common faults and tell the operator exactly what to do in each case. She is expected to ask for help only if she is unable to correct the fault herself.

Being able to read and carry out printed instructions, related mostly to the operation, maintenance and repair of machines or the performance of routine procedures, constitutes probably the most stringent demand made on the English language ability of workers at this level. This, apparently, is something that *has* to be done in English, whereas certain other communicative activities which are notionally performed in English are, in fact, conducted in other languages. Many of the supervisors who were interviewed maintained, for instance, that they *had* to use English with their subordinates as there was no other common language; in actual practice, we found a good deal of supervisor-worker communication being carried on in dialect.

We were able to observe some of the workers as they read and carried out printed instructions of various kinds. The points that I wish to make in this paper are based, mostly, on my observation of such reading activity. I would like to focus on the kinds of reading process used by these workers, which are determined by the purposes of reading and the nature of the texts required to be read. Later, I will attempt to extend my remarks to the language learning processes which appear to be involved in such situations.

First, a few remarks about the texts. The appendix to this paper contains samples of some text material which we were able to collect; these are not, unfortunately, totally representative. Most of these texts appear, on first reading, to be fairly difficult. No attempt seems to be made to control the language to suit the reader with

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average or below average ability in English. The language can be described as "technical"; it certainly conveyed rather little to us. What makes it "technical" and difficult is the use of specialised vocabulary, particularly nouns and verbs, rather than complexity of grammatical structure or discourse patterning. For instance, a sentence such as : "The tailstock must be offset towards the toolpost so that the small end of the taper is on the headstock of the work" means little to a teacher of English, but must be quite lucid to a lathe operator. The syntax, it will be noticed, is involved, but not abnormally obscure : it is the kind of construction that one might use naturally in writing instructions.

From the point of view of discourse, the kinds of text used contain several features which make them highly 'readable'. Most of the texts are short, not longer than 350 words. The visual lay-out makes the task of processing easier : each new item of information is marked off by paragraphing and usually numbered. Particularly significant bits of information are printed in boldface and in general, large and clear type is used. Extensive use is made of pictorial or diagrammatic presentation. Most importantly, the range of illocutionary functions embodied in the texts is narrow and highly predictable. There is little ambiguity about these pieces of text. Although no attempt is made to introduce cohesive features deliberately in order to signal meaning relationships explicitly (e.g., the use of adverbials like "firstly", "finally", etc.), the 'transitions' are not difficult to follow.

Although there are, as we have just seen, features which could assist the less skilful reader, it is doubtful if these features are introduced with the average Singapore worker in mind. I assume the writers use *all* the linguistic resources available to them for the particular purpose they have in mind. Moreover, features of discourse are less obvious to the unskilled reader than features of lexis and syntax. It is easy for such a reader to be so disoriented by the 'surface' difficulties presented by unfamiliar lexis and involved syntax that he misses the discourse features which can aid him in the task of reading. It is no doubt possible for a piece of text which is 'easy' at the level of discourse : in such a case, a reader may be made to feel that he is "getting the message" without actually doing so. Conversely, a piece of text containing a large number of lexical and syntactic hurdles may be relatively easy to process at the level of discourse. But only a skilled reader may be able to get past the purely 'linguistic'

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difficulties: the less competent reader is likely to give up.

The point I am trying to make is that the process of reading for the workers whom we had occasion to observe, could not have been made very much easier by the features of discourse. Moreover, most of them seemed to have little difficulty in 'reading' the instructions which they had to follow. There was little of the fumbling, incomprehension, regression, etc. associated with low reading skill. These workers seemed to be able to take in the meaning fairly quickly. We could not judge, of course, whether the actions they performed in response to the printed instructions were the correct ones, but they seemed to know what they were doing. It also seemed evident that they did need to consult these printed instructions periodically. The instructions would have been redundant if the workers had been able to memorize the information contained in all of them, in which case they would not need to 'read' them; but such was not the case. Obviously, there was *some* kind of 'reading' going on every time a worker referred to a printed instruction, in the sense that she was trying to retrieve information stored in the printed text which would not have been available otherwise. Most or all of these workers had poor ability when it came to reading anything outside the kind of material they had to decipher on the job. Most of them, for example, made very heavy weather of the English questionnaires which they had to fill up; on the other hand, those who chose the Malay or Chinese versions had little difficulty.

We are not able to say how much, if any, reading in English is done by workers at this level beyond the reading that they are compelled to do on the job, related mostly to mechanical operations. We were told that they frequently read and make use of the notices, announcements, etc. displayed on bulletin-boards. Many of these relate to social and recreational activities but some contain important information about job or training opportunities. It is quite possible that this kind of information is disseminated by word of mouth.

We are faced, then with a paradox : here are persons of relatively low education, possessing very little proficiency in English, who are able to decode fairly difficult pieces of text related to their jobs but are unable (as far as one can judge) to 'read' almost anything outside of such texts. How does one explain this phenomenon?

One explanation could be that they are using a 'pseudo-reading' process — that they are not really using print to retrieve 'new'

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information, but are employing some other process which resembles reading superficially.

Children who are being taught to read can become quite adept at 'pseudo-reading'. As they listen to a piece of text being read aloud (by the teacher or by their peers) repeatedly, they are able to memorize it : they are then able to simulate the process of reading quite effectively, using appropriate eye and head movements, long before they have learnt to recognize print.

This is 'pseudo-reading' in its most extreme form : in fact, it is not 'reading' at all, since the 'reader' is making no use of visual recognition but depending totally on auditory recall. Such reading is completely reproductive and non-generative : the reader cannot process any text to which he has not been exposed before.

Genuine reading, on the other hand, is generative in that it allows the reader to handle pieces of text which he has never been exposed to before, and to absorb new information. This process is scarcely dependent on auditory memory; it makes much greater use of *visual* recognition and cueing. The genuine reader uses the marks on the page to retrieve various kinds of meaning represented by the text. The retrieval system is, as a matter of fact, only partially dependent on visual recognition. The more efficient the reader is the less he relies on visual recognition: the process he uses is better described as *cueing*, because here the printed symbols serve to cue and trigger off the complicated processes of 'meaning construction' (this term is more appropriate than 'meaning retrieval' because the efficient reader does not merely *retrieve* meanings which the writer has 'locked' into the text; he *contributes to these meanings*). *The term 'cueing' implies that the reader is making only indirect* use of the visual symbols to get at the meanings and that he does not make use of *all* the symbols on the page. As several writers have suggested, reading is a sampling process : the reader takes in a few samples of the printed text and supplies the rest of the 'message' himself. In order to fill in the gaps he makes use of his knowledge of the language as well as his knowledge of the world, in which is included his knowledge of all other texts he has ever read. The more proficient the reader is in the language, the greater his control of its semantic and syntactic systems, the more efficiently he can be *expected* to read. This is because he can make efficient use of semantic and syntactic cues to construct meanings : he can, for example, anticipate

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and predict meanings more efficiently than the reader who had not mastered the 'code'. In actual practice, there is not always a match between proficiency in the language and reading ability ; there are various perceptual and conceptual factors which can lower reading ability.

What I have described above are the two ends of the reading spectrum : at one end, the pseudo-reading of the pre-literate child, which is fully echoic and auditory ; at the other, the complex set of reading processes used by the fast and efficient reader.

Between these two limits there may exist a whole gamut of reading processes which combine, in varying degree, the characteristics of pseudo-reading with those of genuine reading. What I suggest is that the workers we observed were using some such intermediate process of reading, which seems to be quite adequate for their limited purposes. It would, however, be inadequate for any wider form of reading.

My hunch is — and this is something that can and should be investigated further — that the reading process employed by these workers is largely echoic : that is, they make major use of auditory recall when they read. They may be 'hearing' the texts quite prominently as they process them visually — but there definitely is some visual processing going on, unlike what happens in the pre-literate child.

The content of the texts being read is generally familiar : there is some, but not much new information. The content has, generally speaking, been introduced to the workers *orally*, during preliminary on-the-job training or briefing, by their instructors and supervisors. The training involves a lot of repetitive drilling : the instructor repeats each procedure or operational routine until it is firmly fixed in the auditory memory. (This implies, of course, that the trainee must be able to process all the information that is being received through the *auditory* channel. This is quite a feat in itself, because of the complexity of the information — but I shall go into this aspect of language ability only later.)

As the trainee worker *listens* to the content of the text he is, at the same time, exposed to it visually. With repeated exposure, the relevant pieces of text get photographed into the visual memory. After a time the auditory and visual impressions merge. The trainee can look at a piece of text and recall quickly all the information it

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contains, using both the 'photograph' and 'audio-tape' stored in separate parts of the brain. I suspect that initially the process is more dependent on the auditory impression than the visual, and so resembles 'pseudo-reading' more than it resembles genuine reading. But gradually, it has to depend increasingly on visual recall, or rather on visual cueing.

We are all familiar with adults who are practically illiterate in their own languages and yet can 'read' extended texts, such as religious scriptures. In all such cases the activity of reading is repeated again and again as a fixed routine. Furthermore, it is normally preceded or accompanied by oral activity. This kind of reading is no doubt heavily auditory and echoic. But there are limits to the amount of textual matter that can be stored in the auditory memory and recalled accurately — even though there are individuals who can perform prodigious feats of auditory memory. When the amount of textual information to be stored is large, a secondary memory is necessary to support the auditory memory, and most 'readers' learn to make use of photographic or visual memory. What happens, I believe, is that the visual marks help to 'cue' the process of auditory recall. The 'reader' uses the printed symbols as a mnemonic or filing index in the part of the auditory memory store that he has to draw on. Adults who relid from a printed text using a combination of auditory recall and visual cueing are generally able to tell how much information each part of the text contains. For example, a functionally illiterate person reading a religious text knows when to turn the page, which is something that a pre-literate child may not be able to do.

Visual cueing is less complex and efficient than the syntactic and semantic cueing used by an 'advanced' reader who knows the language well. In fact, visual cueing is a pre-linguistic stage in reading, in the sense that the graphic symbols have not acquired, at this point, their full *value* as elements of a complex linguistic system : they are, as I have just said, merely 'signposts' or visual artefacts, almost devoid of linguistic significance. Every reader, I suspect, has to pass through this transitional stage in the development of his reading ability, whether he is acquiring literacy in his first language or learning to read in a new language. Even if he has already learnt the spoken language, he has to "crack the code" a second time when he learns to read : that is when all the resources of the language can

assist him in obtaining meaning from the text.

The question is : does visual cueing (with diagrams) usually enable a reader to process texts containing new information? In principle, this is possible, provided the amount of [illegible] is small. However, the process is laborious and inefficient. The reader has to 'spell out' and put together the new information, using visual memory to recognise the familiar graphic shapes and using both auditory and visual memory to attach meanings to these shapes. Two factors can help to speed up the process : firstly, the predictability of the new information, and secondly, the existence of pre-determined routines, or chunks of language (extending over one or two phrases or even longer stretches), which can be processed holistically without having to be analysed. Readers are able to phonograph fairly large chunks of language if they recur frequently. The more 'routine' the use of language in the text, the greater is the likelihood that pre-fabricated chunks will occur. What makes reading possible for readers with low literacy skills as well as poor general proficiency in the language (such as the workers we observed) is, essentially, the highly routine nature of the entire activity. Whatever new information they are required to process is largely predictable as it comes from a limited universe of discourse. They know, more or less, what to expect.

The real clue to their 'success' in reading lies, however as I suggested earlier, in their ability to process and store the *auditory* input received during on-the-job training or briefing. Their reading, as I have said before, is largely echoic — they recapitulate what they have 'heard' earlier, with some visual cueing to make the task easier. Successful reading, in other words, results from successful listening. But what is it that makes listening so successful?

Several factors could be responsible, of which I would like to select the nature of the auditory input and the manner in which it is presented. A great deal seems to depend on *when*, *where* and *by whom* the input is provided.

The auditory input is nearly identical, in form and function, with the text material which has to be processed later through reading. Like the latter, it consists mostly of instructions for the operation of machines, together with allied procedures such as the observance of safety rules. The language of instruction consists mainly of the description of machines, that is, the naming of parts and their

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functions, together with the description and explanation of actions which are required to be performed by the listener. When machines and their parts are described by the instructor, the oral description is always accompanied by physical demonstration : the instructor does not talk about anything which the worker cannot see for himself. The actions described are similarly demonstrated. From time to time, workers are asked to handle the machines themselves, while the talk is in progress, and to perform the actions which the instructor has described and demonstrated. In other words, auditory input is accompanied by both visual and tactile inputs. The result is a remarkably rich kind of 'comprehensible input', to use Krashen's term. Under these circumstances, it is almost impossible for the listener *not* to understand and remember what he listens to. Even if he can comprehend only a fraction of the auditory input, he is still receiving most of the same information through the visual and tactile channels. He is not dependent only on language to understand the 'message'. Moreover, each message is normally delivered at fairly slow speed, and repeated several times. All this results in almost perfect information retrieval and storage. It is listening at its most efficient.

The kind of learner that I am describing has several other things in his favour which are not available to the ordinary learner in the classroom. There is, for instance, the overwhelming pressure to learn and succeed : nothing like it can ever be introduced into the classroom. The worker knows that he cannot afford to fail. There is a kind of earnestness in his situation which is qualitatively different from the motivation of even the most serious pupil. Learning in the classroom is, at best, a preparation for life : learning on the worksite *is* life. The stakes are very much higher.

Then, consider the relationship between the learner and the teacher in such a situation. The teacher, in this case, is an expert in the trade which the learner is trying to acquire. The teacher, in other words, is a model of what the learner is trying to achieve. Moreover, it is quite easy for the learner to identify himself with the teacher : they are comparable in their socio-cultural backgrounds and educational achievements. How many schoolchildren can identify themselves with their teacher in the same way? How many regard the teacher as their professional ideal; how many would want to acquire his skills? The teacher, for most pupils is connected very indirectly

with the goals they might wish to achieve; his contribution to the achievement of those goals may not be apparent. The relationship between master-craftsman and apprentice is very different, and one can only speculate about the extent to which it might influence learning on the worksite.

We have to remind ourselves at this point that what we are concerned with is not the general processes of learning on the worksite, but only language learning. The point to be emphasized is that language learning is scarcely ever seen to be the *goal* in such learning situations : the learners concerned are neither seen by others as language learners nor do they see themselves as language learners. This may be the most crucial factor of all. Most people concerned with the training of workers in Singapore do not seem to have considered on-the-job training in the various trades and skills as a possible input to language learning, although there is now some concern about teaching them English. We observed a few training sessions conducted in vocational training institutes. Instruction in English was a part of the programmes; it occupied a part of the timetable. There were English instructors who conducted English classes. We did not actually visit these classes, but we rather suspect that they are not very different from the English classes conducted in schools. Meanwhile, the trainees continue to learn much of their English in the metalworking or carpentry workshop. It has not occured to anyone to make use of the opportunities for learning that exist here.

What we have to contend with is not success, or failure, in language learning in the conventional sense, but a very different kind of success, which should perhaps make us reconsider our ideas of what it may mean to learn language. The people we are talking about are extremely poor users of English, who would fail any conventional test of language proficiency. They are barely able to understand what is said to them in English, or to take part in any 'general' conversation. Their literacy in English, beyond the few routine tasks they perform on the shopfloor, is almost non-existent. But consider what they are able to achieve : they are able to learn, from scratch, how to operate and maintain sophisticated machinery, and all this learning is carried in English. It is quite a feat of learning, but there is little to show for it.

What does all this prove? Very little. It only suggests that success in language learning is not only an elusive but a highly relative

concept. Most of us tend to view language learning as a fairly monolithic activity. We view language learning in terms, essentially, of *competence*. Language is assumed to have been learnt only when the 'creative construction' process has been activated — in other words, when the learner has begun to "crack the code". It is accepted, of course, that there may be different degrees of success in *operating* the code, once it has been acquired; but the essential requirement for success seems to be the ability to use language *generatively*. This is no doubt essential for the 'general' learner, for whom it is impossible to predict the exact tasks that will have to be performed. At the other extreme from the general learner is the kind of learner who uses language for highly restricted and predictable tasks. Is he really required to 'learn' language? Does he learn in the same way as the general learner? The popular view, at the moment, is that such a person may be required to use only 'language-like' behaviour, rather than genuine language behaviour, which is — by definition — generative.

What seems to be involved here, then, is some kind of rote-learning, rather than "creative construction". The learners do not actually "crack the code", but they operate fixed patterns which exemplify the code. Our observation of Singapore workers suggests, however, that the dichotomy between "rote-learning" and "creative-construction" may not be total. I would like to suggest that these workers are, in fact, able to "crack the code", but in a very limited way, and for very limited purposes. Within a very narrow range, their language behaviour is, in fact, generative : they can, I feel — although at the moment I do not have material evidence to support this feeling — handle most kinds of oral and written discourse, including things they have never been exposed to before, provided it relates to the kinds of activity they normally perform on the worksite. Beyond this narrow range, they have almost no English.

Our observation seems to confirm that people can *learn* enough language to 'do' certain things by just being made to do them repeatedly ; it may not be necessary to 'teach' them the language through a separate programme. This suggests, in turn, that doing things that involve the use of language may, after all, be the most economical way of learning language, if not the most efficient. This is what some theoreticians have been telling us; I have merely cited some crude empirical evidence that seems to confirm the view.

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JOB INSTRUCTION SHEET SAMPLE 1

PRODUCT: 41C/CV/CX	OP NO:	PROCEDURE NAME: TOPCASE REPAIR I & II	ASSEMBLY NO:	DATE: 20 OCTOBER 83
IMPORTANT STEP: Logical step to *advance* the work. *Action* word.		KEY POINTS: Anything in a *step* that might make or break the job. *Or* that might make the work easier, such as knack, timing, technique, etc.		
WHAT		HOW		WHY
1. Prepare station.		A. Collect all reject units from Topcase Inspection and Heatstake stations (for Repair I) and Final Assembly (for Repair II).		A. To gather units to work upon. For Repair I, units are accompanied by identification stickers. For Repair II, units are accompanied by record sheets.
		B. Place the latest rejects at bottom of stack of rejects.		B. Always repair the earlier dated rejects first.
2. Antistatic precaution.		A. Attach antistatic strap to wrist and switch on antistatic fan.		A. Control static electricity.
3. Confirm reject unit.		A. Pick up a reject unit and check (with a tester, if necessary) the mode of failure.		A. To ensure that the failure mode tallies with that recorded.
4. Rework on reject unit.		A. Repair the unit according to its failure mode.		A. Different failures require different rework.
5. Initial.		A. Initial on the keyboard.		A. For traceability.
6. Record.		A. Record as record sheets require.		A. For record purposes.
7. Identify scrap.		A. Write the mode of failure on a sticker and stick it on the scrap unit (e.g., hybrids).		A. Traceability is possible for any scrap generated.
8. Transfer.		A. Transfer repaired unit according to Final Assy or Heatstake operation which ever is necessary for the operation.		A. For next operation.
		PRECAUTIONS: • Make sure all repaired units are tested good before passing on to the next station.		

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APPENDIX I (continued)

PRODUCT: 4IC/CV/CK	QP NO:	PROCEDURE NAME: TOPCASE INSPECTION	ASSEMBLY NO:	DATE: 25 OCTOBER 83
IMPORTANT STEP: Logical step to advance the work. Action word.		KEY POINTS: Anything in a step that might make or break the job. Or that might make the work easier, such as knack, timing, technique, etc.		
WHAT		HOW	WHY	
1. Inspection of Topcase Assy		1) Switch on Deloning fan and use antistatic strap. 2) Take Topcase assembly and inspect for:- i) contamination in window area (blow with air-gun when ever necessary to clean off the dust particles) ii) scratches on window and cases. iii) misloads or illegible printing on the keys. iv) overlay scratches, misprint or imperfections.	1) Prevent ESD. 2) To clear off contaminent.	
2. Key Feel Test		2) Press each key from left to right, top to bottom and check for each key feel.		
3. Transfer		3) Transfer good unit to next station for heatstake and sonic weld. Rejected units should be sent to Topcase Repair Station.		

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APPENDIX 1 (*continued*)

PRODUCT: 41C/CV	OP NO:	PROCEDURE NAME: BOTTOM CASE ASSY	ASSEMBLY NO: 721	DATE: 20 OCTOBER 83
IMPORTANT STEP: Logical step to *advance* the work. *Action* word.		KEY POINTS: Anything in a *step* that might make or break the job. *Or* that might make the work easier, such as knack, timing, technique, etc.		
WHAT		HOW	WHY	
Assembly Bottom Case		1. Place the Bottom Case with the serial Number down on the table. 2. Insert I/O Assy with contact parts up and the battery connect toward the inner space of Bottom Case. NOTE: Make sure the I/O Assy is press down fully to ensure firmness in Assembly.	2. To ensure proper Assy.	

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APPENDIX 2

BASIC POWER PRESS SAFETY REGULATIONS

1. NEVER have more than one operator on the press.
2. NEVER operate or approach any press unless instructed by your Supervisor or Shift Leader.
3. NEVER use your hands to remove anything from within the die area unless the motor is off and the flywheel has come to a complete stop.
4. NEVER talk to another person while operating a press. If talking is necessary stop the press until the conversation is completed.
5. NEVER leave a running press unattended. Shut off the power to prevent an unintentional start.
6. ALWAYS make sure that there are only required items placed near the die area.
7. ALWAYS use the magnet tong to remove the parts from the die area.
8. ALWAYS operate a press with both hands to activate the double button.
9. ALWAYS check that the sweep away device and the photo electric cell are in good order before operating on the press.
10. ALWAYS check your machine to ensure that there is no double punching before working on the press.
11. ALWAYS report any abnormal machine condition or machine malfunction to your supervisor or shift leader immediately.
12. ALWAYS ask your supervisor or shift leader if you have any doubt.

The above rules and regulations were explained to me and I fully understood and agree to follow them.

Interviewee's Signature	Interviewer's Signature
Date	Date

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